

**Claims:**

1. A method for determining the position, relative to the grab (1, 2) transporting them, of the end heads used in packing paper, cellulose, and board rolls, when the end head is attached to the grab (1, 2), **characterized in that**

- a detector (7) is transported along such a circular curve, which is assumed to be intersected by the circular curve defined by the edge of the end head,
- the angle position of the detector (7) on the circular curve of its path is measured,
- the intersection points ( $x_1, z_1; x_2, z_2$ ) of the curve travelled by the detector (7) and the edge of the head are detected,
- the position of the centre point ( $x_0, z_0$ ) of the end head is calculated on the basis of
  - a) the radius of the circle travelled by the detector and the position of the centre point ( $x_m, z_m$ ) of the circle,
  - b) the position ( $x_t, z_t$ ) of the grab's tool point,
  - c) the assumed radius of the end head, and
  - d) the positions ( $x_1, z_1; x_2, z_2$ ), of the detected intersection points,
- the position of the centre point ( $x_0, z_0$ ) of the end head in the set of co-ordinates of the grab.

2. A method according to Claim 1, **characterized in that** the detector (7) is transported at the first end of a measuring arm (6) fitted to a rotation shaft (5) and the angle of rotation of the measuring arm (6) on the shaft (5) is measured.

3. A method according to Claim 2, **characterized in that** the measurement of the angle of rotation ( $\alpha$ ) of the measuring arm is calibrated by rotating the measuring arm (6) towards a face (10) at a predefined rotation-angle position ( $\varphi$ ), until the face is detected and the measurement of the angle of the measuring arm is set on the basis of this known angle.

4. A method according to any of the above Claims, **characterized in that** the length of the measuring arm (6) is calibrated with the aid of a calibrating end head, the radius of

which is precisely known and which is set in a precisely defined position on the grab.

5. A method according to any of the above Claims, **characterized** in that the length of the measuring arm (6) is calibrated with the aid of a calibration face formed in the grab, at the position of which a measurement result corresponding to the calibrating end head is obtained.

6. An arrangement for determining the position, relative to the grab (1, 2) transporting them, of end heads used in packing paper, cellulose, and board rolls, when the end head is attached to the grab (1, 2), which grab includes at least a body structure (1), elements for gripping the end head (2), and a predefined tool point (xt, zt), **characterized**

- by a measuring arm (6) which is arranged to rotate on a rotation shaft (5) fitted to the body structure (1),
- by a measuring device (8), which can be used to determine the angle of rotation of the measuring arm (6) around the rotation shaft (5), and
- by at least one detector (87) attached to the measuring arm (6), which can be used to detect the passage of the edge of the end head over the detector.

7. An arrangement according to Claim 6, **characterized** in that the rotation shaft (5) of the measuring arm (6) is at a distance from the tool point (xt, zt).

8. An arrangement according to Claim 6 or 7, **characterized** by a first calibration face (10), which is arranged parallel to a straight line running the shaft (5) of the measuring arm (6) and to a predefined angle position on the circumferential path of the measuring arm (6).

9. An arrangement according to any of Claims 6 - 8, **characterized** by a second calibration face, which is arranged on the circumferential path of the measuring arm (6), in such a way that a detection corresponding to the edge of the end head is obtained at its position.